

MEMORANDUM

To: Board of Regents

From: Board Office

Subject: Unit Cost Study for FY 1999

Date: June 5, 2000

Recommended Action:

Receive the unit cost study for FY 1999.

Executive Summary:

The Board of Regents' strategic plan outlines its accountability objective in key result area 4. The Board is charged with exercising effective stewardship of the institutions' state, federal, and private resources. On a biennial basis, the Regent universities compile and report to the Board the unit costs of instruction.

Unit cost represents the general fund supported cost of instructing a full-time equivalent (FTE) student at a given level. Unit cost is considered in establishing tuition rates, reviewing the program emphases of the universities, and measuring instructional productivity and cost benefits. The average Regent undergraduate unit cost is also used as a basis to determine the funding goal for the Iowa Tuition Grant Program.

The following table denotes the FY 1999 unit cost of instruction for each of the Regent universities by student level, the FY 1999 composite unit cost for the Regents and the percentage increases of the unit cost over the two-year period FY 1997 to FY 1999. The Regent composite unit cost increased 8.1% over the two years, for an average of about 4% each year. The highest institutional unit cost reported is at SUI for the more costly advanced graduate and professional level programs.

**UNIT COST OF INSTRUCTION
FY 1999**

	SUI		ISU		UNI		REGENT COMPOSITE	
		2 Yr. Incr.		2 Yr. Incr.		2 Yr. Incr.		2 Yr. Incr.
Lower Division	\$6,435	20.8%	\$6,663	8.1%	\$5,381	4.0%	\$6,321	12.3%
Upper Division	10,068	12.0%	9,550	9.1%	9,312	10.7%	9,666	10.5%
Overall Undergraduate	8,301	15.3%	8,242	8.1%	7,742	9.9%	8,151	11.0%
Master's	18,261	7.5%	11,086	13.2%	11,580	8.9%	14,652	10.3%
Advanced Graduate	25,519	-1.6%	14,075	10.8%	16,922	13.6%	19,508	3.8%
Professional	21,782	5.0%	48,169	11.3%	N/A	N/A	24,622	6.0%
Composite	\$12,623	7.3%	\$9,677	8.3%	\$8,292	9.6%	\$10,617	8.1%

Background:

Regent universities have prepared general fund unit cost calculations in alternate years since FY 1969. This information is compiled to: analyze unit cost changes over time; assist in the Board's tuition rate discussion; review program emphases; and measure productivity and cost benefits. Standardized computation methods are used to calculate both total and variable costs of instruction.

In its simplest terms, an average cost of instruction could be determined by dividing total costs by the total number of students. However, the cost of instruction varies significantly according to student level and educational programs offered at each institution. The unit cost of instruction determines which institutional costs are related to instruction and classifies these costs according to student level. Since inception, the formula for computation of the basic unit cost has remained essentially unchanged.

The level of educational programs offered at a Regent university significantly affects costs. The unit costs of instruction are calculated making certain assumptions relative to instructional costs at the various student levels and is determined for each of five student educational levels: lower division (freshman, sophomore); upper division (junior, senior); master's; advanced graduate (i.e. Ph.D.); and professional (i.e. MD, DVM, DDS, JD). The Regent universities have substantial responsibilities and costs associated with the more costly graduate and professional programs.

The nature of programs offered at the Regent universities affects costs in distinct ways. Higher cost undergraduate programs such as engineering, the physical and biological sciences, and pharmacy are prevalent at the Regent universities. The University of Iowa, for instance, offers undergraduate degrees in microbiology and biochemistry and has a large number of students enrolled in pre-medicine and pre-dentistry programs. Iowa State University offers degrees in agriculture and molecular biology and has a large number of students enrolled in pre-medicine and pre-veterinary medicine programs. Providing these various educational opportunities makes for a dramatically diverse cost structure.

Analysis:

Expenditures used for the unit cost computation include those for instruction, research, academic support, student services, institutional support, and plant operations and maintenance (excluding building repairs). Expenditures for building repairs, public service, scholarships and fellowships, auxiliary enterprises, and health care units are excluded from the computation because such items are not considered to be a cost of instruction.

FTE enrollments are based on 31 credit hours per student per fiscal year for undergraduates and 18 credit hours per student per fiscal year for advanced graduate students; each professional student is counted as one FTE. In addition to undergraduate programs, the University of Iowa and Iowa State University both have master's, advanced graduate, and professional level programs. The University of Northern Iowa has undergraduate, master's, and advanced graduate programs only.

During the compilation of the FY 1997 data, SUI reclassified the costs and FTEs associated with the College of Law from the Master's category to the more appropriate Professional category. In addition, SUI moved the costs and FTEs associated with the College of Pharmacy from the Upper Division and Advanced Graduate levels to the Professional level.

In the computation of the cost of instruction for the FY 1999 period, \$633.6 million (83.2%) of Regent general fund expenditures are allocated by student level. From FY 1997 to FY 1999, general fund expenditures at the Regent institutions increased by 9.5%, FTE enrollment increased by 1.3%, and the composite unit cost of instruction increased by 8.1%. Attachment A provides detail by university and student level for expenditures included in the calculations, FTE students, and composite unit costs.

Of the \$633.6 million expenditures included in the determination of the unit cost of instruction for FY 1999, 79.2% represent variable costs and 20.8% represent fixed costs.

- Variable costs of instruction are those costs which change in proportion to the number of students. These costs include direct instructional costs, general administration, and student services and are computed by subtracting specified fixed costs from total costs. (See Attachment B.)
- Fixed costs include research, library books, physical plant operations, and equipment. These costs are expected to remain stable within a reasonable enrollment range.

From FY 1997 to FY 1999, the Regent institutions' total composite unit cost increased 8.1%, the fixed costs increased 7.4%, and the variable costs increased 8.4%.


**VARIABLE COST OF INSTRUCTION
FY 1999**

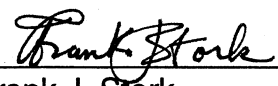
	<u>SUI</u>	<u>ISU</u>	<u>UNI</u>	<u>REGENT COMPOSITE</u>
Lower Division	\$5,247	\$5,084	\$4,220	\$5,004
Upper Division	<u>8,208</u>	<u>7,287</u>	<u>7,302</u>	<u>7,653</u>
Composite Undergraduate	6,768	6,289	6,071	6,454
Master's	14,888	8,459	9,081	11,600
Advanced Graduate	20,806	10,740	13,269	15,446
Professional	17,759	36,756	0	19,495
Composite Variable Unit Costs	\$10,292	\$7,384	\$6,502	\$8,406
Percent Change from FY 1997	8.2%	11.1 %	5.9%	8.4%

**FIXED COST OF INSTRUCTION
FY 1999**

	<u>SUI</u>	<u>ISU</u>	<u>UNI</u>	<u>REGENT COMPOSITE</u>
Total Fixed Costs	\$57,101,685	54,102,736	20,742,597	\$131,947,018
Composite Fixed Unit Costs	2,331	2,293	1,790	2,211
Percent Change from FY 1997	3.4%	0.2 %	25.4%	7.4%

The increase in the University of Northern Iowa's fixed costs result mostly from obligations related to plant operations and maintenance, the new Wellness Center, and Information Technology Services.


Andrea L. Anania

Approved: 
Frank J. Stork

ATTACHMENT A
EXPENDITURES INCLUDED, FTE STUDENTS, AND UNIT COST OF INSTRUCTION
FY 1997 AND FY 1999

	Expenditures Included			FTE Students			Unit Cost		
	FY 1997	FY 1999	% Change	FY 1997	FY 1999	% Change	FY 1997	FY 1999	% Change
UNIVERSITY OF IOWA									
Lower Division	\$41,892,459	\$52,068,532	24.3%	7,864	8,091	2.9%	\$5,327	\$6,435	20.8%
Upper Division ⁽¹⁾	73,931,285	86,030,969	16.4%	8,224	8,545	3.9%	8,990	10,088	12.0%
Subtotal Undergraduate	\$115,823,744	\$138,099,501	19.2%	16,088	16,636	3.4%	\$7,199	\$8,301	15.3%
Master's ⁽¹⁾	42,500,513	43,370,949	2.0%	2,502	2,375	-5.1%	16,987	18,261	7.5%
Adv. Graduate	56,924,738	56,882,207	-0.1%	2,196	2,229	1.5%	25,922	25,519	-1.6%
Professional ⁽¹⁾	67,614,037	70,792,510	4.7%	3,259	3,250	-0.3%	20,747	21,782	5.0%
Total	\$282,863,032	\$309,145,167	9.3%	24,045	24,490	1.9%	\$11,764	\$12,623	7.3%
IOWA STATE UNIVERSITY									
Lower Division	\$49,943,425	\$57,998,142	16.1%	8,103	8,705	7.4%	\$6,164	\$6,663	8.1%
Upper Division	92,028,277	100,434,675	9.1%	10,515	10,517	0.0%	8,752	9,550	9.1%
Subtotal Undergraduate	\$141,971,702	\$158,432,817	11.6%	18,618	19,222	3.2%	\$7,626	\$8,242	8.1%
Master's	18,982,238	18,613,433	-1.9%	1,938	1,679	-13.4%	9,795	11,086	13.2%
Adv. Graduate	30,010,406	32,414,278	8.0%	2,363	2,303	-2.5%	12,700	14,075	10.8%
Professional	17,441,237	18,882,308	8.3%	403	392	-2.7%	43,279	48,169	11.3%
Total	\$208,405,583	\$228,342,836	9.6%	23,322	23,596	1.2%	\$8,936	\$9,677	8.3%
UNIVERSITY OF NORTHERN IOWA									
Lower Division	\$22,439,407	\$22,365,387	-0.3%	4,338	4,156	-4.2%	\$5,173	\$5,381	4.0%
Upper Division	49,880,155	58,193,329	16.7%	5,928	6,249	5.4%	8,414	9,312	10.7%
Subtotal Undergraduate	\$72,319,562	\$80,558,716	11.4%	10,266	10,405	1.4%	\$7,045	\$7,742	9.9%
Master's	9,961,030	9,750,565	-2.1%	937	842	-10.1%	10,631	11,580	8.9%
Adv. Graduate	5,035,804	5,787,307	14.9%	338	342	1.2%	14,899	16,922	13.6%
Total	\$87,316,396	\$96,096,588	10.1%	11,541	11,589	0.4%	\$7,566	\$8,292	9.6%
TOTAL REGENT UNIVERSITIES									
Lower Division	\$114,275,291	\$132,432,061	15.9%	20,305	20,952	3.2%	\$5,628	\$6,321	12.3%
Upper Division	215,839,717	244,658,973	13.4%	24,667	25,311	2.6%	8,750	9,666	10.5%
Subtotal Undergraduate	\$330,115,008	\$377,091,034	14.2%	44,972	46,263	2.9%	\$7,340	\$8,151	11.0%
Master's	71,443,781	71,734,947	0.4%	5,377	4,896	-8.9%	13,287	14,652	10.3%
Advanced Graduate	91,970,948	95,083,792	3.4%	4,897	4,874	-0.5%	18,802	19,508	3.8%
Professional	85,055,274	89,674,818	5.4%	3,662	3,642	-0.5%	23,226	24,622	6.0%
TOTAL	\$578,585,011	\$633,584,591	9.5%	58,908	59,675	1.3%	\$9,824	\$10,617	8.1%

**ATTACHMENT B
INSTITUTIONAL COSTS, FY 1999
VARIABLE UNIT COST CALCULATIONS BY STUDENT LEVEL**

	General Program Operations - General University			
	<u>University of Iowa</u>	<u>Iowa State University</u>	<u>University of Northern Iowa</u>	<u>Total/ Composite</u>
VARIABLE COST FACTOR				
I. EXPENDITURES INCLUDED	\$309,145,167	\$228,342,836	\$96,096,588	\$633,584,591
II. EXPENDITURE EXCLUSIONS				
A. Research	4,721,364	14,688,145	824,709	20,234,218
B. Library Books	8,221,852	6,454,731	1,542,918	16,219,501
C. Plant Operations & Maintenance	38,847,077	27,842,842	15,280,137	81,970,056
D. Equipment	5,311,392	5,117,018	3,094,833	13,523,243
E. Subtotal Expenditures Excluded	<u>57,101,685</u>	<u>54,102,736</u>	<u>20,742,597</u>	<u>131,947,018</u>
III. EXPENDITURES - VARIABLE COSTS	<u>\$252,043,482</u>	<u>\$174,240,100</u>	<u>\$75,353,991</u>	<u>\$501,637,573</u>
IV. VARIABLE COST FACTOR	81.53%	76.31%	78.41%	79.17%
VARIABLE COST PER FTE STUDENT				
A. Lower Division	\$5,247	\$5,084	\$4,220	\$5,004
B. Upper Division	8,208	7,287	7,302	7,653
Undergraduate Composite	6,768	6,289	6,071	6,454
C. Master's	14,888	8,459	9,081	11,600
D. Advanced Graduate	20,806	10,740	13,269	15,446
E. Professional	17,759	36,756	0	19,495
F. Total/Composite	\$10,292	\$7,384	\$6,502	\$8,406